

## Patent Abstracts of Japan

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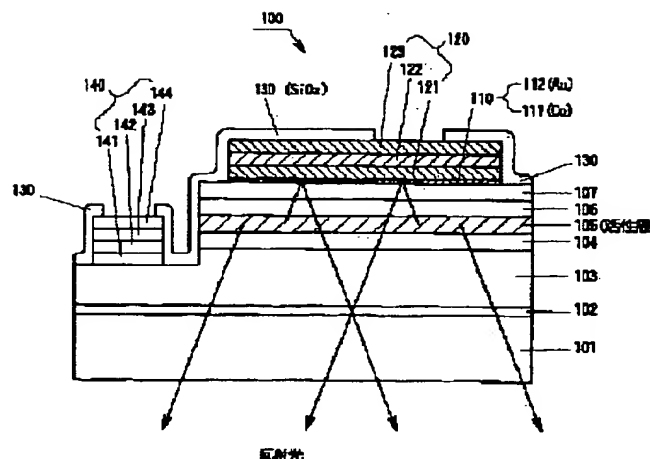
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INVENTOR : HORIUCHI SHIGEMI:

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TITLE : GALLIUM NITRIDE COMPOUND  
SEMICONDUCTOR DEVICE AND  
MANUFACTURE THEREOF



**ABSTRACT :** PROBLEM TO BE SOLVED: To uniform the contact resistance at a contact plane between a thick film positive electrode and contact layer by providing a thin metal layer between the contact layer at a p-side semiconductor and thick film positive electrode connected to the contact layer for reflecting a light.

**SOLUTION:** On a contact layer 107, a thin metal layer 110 is formed by the metal deposition and composed of a first Co thin metal layer 111 bonded to the contact layer 107 and second Au thin metal layer connected to Co. A thick film positive electrode 120 is formed by laminating on this thin film metal layer 110 a first Ni thick film positive electrode layer 121, second Ti thick film positive electrode layer 122, and third Ni thick film positive electrode layer 123. According to this constitution the intervention of the thin film metal layer 110 results in that the contact resistance between the contact layer 107 and thin film metal layer 110 is low, uniform and good Ohmic over the entire contact plane and no emission light intensity nonuniformity occurs.

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